



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

NRESF 23.1
6/25/05

May 25, 2005

Reply to
Attn Of: OEA-095

MEMORANDUM

SUBJECT: Recommended minimum exposure area for consideration at residential lots, North Ridge Estates, Klamath Falls, Oregon

FROM: Julie Wroble
Region 10 Toxicologist

TO: Dr. D. Wayne Berman
President, Aeolus, Inc.

In the RI/FS scoping meeting held in Portland, Oregon, on May 18, 2005, Dr. Berman requested guidance on the minimum exposure area that would need to be sampled at North Ridge Estates. After consulting with EPA risk assessors both within Region 10 and in other regions, I am recommending a minimum area of one quarter of an acre (10,890 square feet). This recommendation is consistent with the Superfund Lead-Contaminated Residential Sites Handbook (EPA 2003). EPA's Risk Assessment Guidance for Superfund, Part A, suggests that an area the size of a residential yard (e.g., 1/8 acre) may be appropriate in some cases and the Soil Screening Guidance recommends an exposure area of 0.5 acres for a suburban residential lot. Given the relatively large size of yards at North Ridge Estates and these varying default values, I recommend one quarter of an acre.

The Superfund Lead-Contaminated Residential Sites Handbook recommends that lots larger than one acre in size should be divided in 1/4 acre sections. One five-point composite should be collected from each section. This document also recommends that separate discrete samples be collected from play areas and gardens, if present. I agree that such areas should be targeted, but perhaps composite samples would be more appropriate if the goal is to assess exposures in these areas. I also advocate for discrete samples to be collected in areas where large quantities of ACM are present, unless these areas are targeted specifically for remediation.

If you have any further questions, please call me at 206/553-1079.

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References:

U.S. EPA, August 2003, Superfund Lead-Contaminated Residential Sites Handbook, Final, OSWER 9285.7-50,
<http://www.epa.gov/superfund/programs/lead/products/handbook.pdf>.

U.S. EPA, March 2001, Supplemental Guidance for Developing Soil Screening Levels at Superfund Sites, Peer-Review Draft, OSWER 9355.4-24,
<http://www.epa.gov/superfund/resources/soil/ssgmarch01.pdf>.

U.S. EPA, July 1996, Soil Screening Guidance: Technical Background Document, EPA/540/R-95/128,
<http://www.epa.gov/superfund/resources/soil/toc.htm#p2>.

U.S. EPA, December 1989, Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), EPA/540/1-89/002,
<http://www.epa.gov/oswer/riskassessment/ragsa/index.htm>.